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IN THE UNITED STATES RECEIVING OFFICE PATENT COOPERATION TREATY

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: 10/550,198

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Applicant

: Visvanathan et al

371(c) Date Group Art Unit : September 21, 2005

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Examiner:

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Docket No.

: 007193-11

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The Information Disclosure Statement submitted herewith is being filed within three months of the filing date of the application or date of entry into the national stage of an international application or before the mailing date of a first Office Action on the merits, whichever event occurs last. 37 C.F.R. Section 1.97(b).

Enclosed is Form 1449 and 135 foreign and non-patent references. Applicants respectfully request that each of the cited information be expressly considered during the prosecution of this application and that the cited references be made of record therein and appear among the "References Cited" on any patent to issue therefrom. If required, a copy of each reference is attached.

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Reg. No.: 52,492 Tel. No.: 303-828-0655 Fax No.: 303-828-2938 Jennifer M. McCallum, Ph.D., Esq.

Customer No.: 36234

Substitute for form 1449/PTO	Comp	lete if Known
	Application Number	10/550,198
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Filing Date	09/21/2005
	First Named Inventor	Kumar Visvanathan
(1)	Art Unit	Unknown
(Use as many sheets as necessary)	Examiner Name	Unknown
Sheet 1 of 8	Attorney Docket Number	007193-11

	U.S. Patent Documents				
Examiner Initials*	Cite No. 1	Document Number Number-Kind Code ^{2 (f known)}	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	4,016,043 A	04-05-1977	Shuurs et al.	
	2	4,018,653 A	04-19-1977	Mennen	
	3	4,366,241 A	12-28-1982	Tom et al.	
	4	4,424,279 A	01-03-1984	Bohn et al.	
	5	4,683,195 A	07-28-1987	Mullis et al.	
	6	4,843,000 A	06-27-1989	Litman et al.	
	7	4,849,338 A	07-18-1989	Litman et al.	
	8	4,946,778 A	08-07-1990	Ladner et al.	
,	9	5,091,513 A	02-25-1992	Huston et al.	
	10	5,227,487	07-13-1993	Haugland et al.	
	11	5,274,113 A	12-28-1993	Kang et al.	
	12	5,326,692 A	07-05-1994	Brinkley et al.	
	13	5,405,975 A	04-11-1995	Kuhn et al.	
	14	5,433,896 A	07-18-1995	Kang et al.	
	15	5,442,045 A	08-15-1995	Haugland et al.	
	16	5,451,663 A	09-19-1995	Kang et al.	
	17	5,453,517 A	09-26-1995	Kuhn et al.	
	18	5,459,276 A	10-17-1995	Kuhn et al.	
	19	5,516,864 A	05-14-1996	Kuhn et al.	
	20	5,550,050 A	08-27-1996	Cytotherapeutics	
				et al.	
	21	5,573,909 A	11-12-1996	Singer et al.	
	22 ·	5,648,270 A	07-15-1997	Kuhn et al.	
<u>-</u>	23	5,691,198	11-25-98	Jin	

Examiner	Date	*
Signature	Considered	

Substitute for form 1449/PTO	Complete if Known		
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	U.S. Patent Documents				
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	24	5,723,218	03-03-1998	Haugland et al.	
	25	5,837,821	11-17-1998	Wu	
-	26	6,056,957	05-02-2000	Chou et al.	
	27	6,180,370 B1	01-30-2001	Queen et al.	
	28	6,180,377 B1	01-30-2001	Morgan et al.	

	Foreign Patent Documents				
Cite No. 1	Foreign Patent Document Number-Kind Code ^{2 (ff known)}	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
29	EP 0239400 B1	08-03-1994	Medical Res Council		
30	EP 0425731 B1	05-08-1991	Siemens AK		
31	WO 2001/36488 A1	05-25-2001	Leiv Eiriksson		
			Nyfotek		
32	WO 84/03564 A1	09-13-1984	Geysen		
33	WO 90/07936 A1	07-26-1990	Chiron Corp.		
34	WO 92/19195 A1	11-12-1992	Brown Univ.		
			Rsrch Cntr		
35	WO 93/06121 A1	04-01-1993	Affymax Tech		
36	WO 94/25503 A6	11-10-1994	Cytotherapeutics		
37	WO 95/01203 A3	01-12-1995	Cytotherapeutics		
38	WO 95/05452 A2	02-23-1995	Cytotherapeutics		
39	WO 96/02286 A1	02-01-1996	Cytotherapeutics		
40	WO 96/02646 A3	02-01-1996	Cytotherapeutics		
	30 31 32 33 34 35 36 37 38 39	Number-Kind Code ^{2 (ft known)} 29 EP 0239400 B1 30 EP 0425731 B1 31 WO 2001/36488 A1 32 WO 84/03564 A1 33 WO 90/07936 A1 34 WO 92/19195 A1 35 WO 93/06121 A1 36 WO 94/25503 A6 37 WO 95/01203 A3 38 WO 95/05452 A2 39 WO 96/02286 A1	Number-Kind Code ^{2 (ft known)} EP 0239400 B1 08-03-1994 30 EP 0425731 B1 05-08-1991 31 WO 2001/36488 A1 05-25-2001 32 WO 84/03564 A1 09-13-1984 33 WO 90/07936 A1 07-26-1990 34 WO 92/19195 A1 11-12-1992 35 WO 93/06121 A1 04-01-1993 36 WO 94/25503 A6 11-10-1994 37 WO 95/01203 A3 01-12-1995 38 WO 95/05452 A2 02-23-1995 39 WO 96/02286 A1 02-01-1996	Number-Kind Code ^{2 (f known)} MM-DD-YYYY Applicant of Cited Document	

Examiner	Date
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Substitute for form 1449/PTO	Complete if Known		
	Application Number	10/550,198	
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	Foreign Patent Documents				
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	41	WO 96/11698 A1	04-25-1996	Symphony Pharmaceuticals	
<u>-</u>	42	WO 96/40871 A1	12-19-1996	Cytotherapeutics	
	43	WO 96/40959 A1	12-19-1996	Cytotherapeutics	
	44	WO 97/12635 A1	04-10-1997	Cytotherapeutics	

	···	NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s) publisher, city and/or county where published.	T ²
	45	Adams et al., Cancer Res. 53:4026-4034 (1993)	
	46	Akashi et al., J. Immunol. 164:3471-3475 (2000)	
	47	Akira et al., Nature Immunology 2:675-680 (2001)	
	48	Andus et al., <i>Hepatology</i> 13: 364-375 (1991)	-
	49	Austin et al., Gastroenterology 122(4) Suppl. 1: A.648 – A.649, 2002	
	50	Bandyopadhyay et al., Mol. Cell. Biol. 4:749-754 (1984)	
· ·	51	Berglund et al., Biotechnology 11:916-920 (1993)	
	52	Berkner et al., BioTechniques 6:616-629 (1988)	
	53	Berkner, Curr. Top. Microbiol. Immunol. 158:39-66 (1992)	
	54	Bieback et al., J. Virol. 76:8729-8736 (2002)	
	55	Bigatello et al., Am J. Gastroenterol. 82(1):11-15 (1987)	
	56	Breakefield et al., Mol. Neurobiol. 1:339-371 (1987)	
	57	Buchschacher and Panganiban, J. Virol. 66:2731-2739 (1982)	
. ,	58	Chan et al., Scand J Gastroenterol. 32(9):942-946 (1997)	
	59	Chothia et al., J. Mol. Biol. 196: 901 (1987)	
	60	Chothia et al., J. Mol. Biol. 227:799 (1992)	

Examiner	Date
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Examiner Initials*	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s) publisher, city and/or county where published.	T ²
	61	Cumber et al., J. Immunol. 149:120-126 (1992)	
	62	Davies et al., FEBS Lett. 339: 285-290 (1994)	
	63	Delaney et al., Hepatol., 28:1134-46 (1998)	
	64	Deviere et al., Gastroenterology 103:1296-1301 (1992)	
	65	Enomoto et al. Gastroenterology 115: 443-451 (1998)	
	66	Enomoto et al., J. Gastroenterology Hepatol. 15 (Suppl): D20-D25 (2000)	
	67	Erickson et al., Science 294:527-533 (1990)	
	68	Fink et al., Ann. Rev. Neurosci. 19:265-287 (1996)	
	69	Fink et al., Hum. Gene Ther. 3:11-19 (1992)	
	70 ·	Fodor et al., Science 251:767-777 (1991)	
	71	Freese et al., Biochem. Pharmacol. 40:2189-2199 (1990)	
	72	French, J. Biomed Sci. 8:20-27 (2001)	
	73	Fukui et al., J. Hepatol. 12:162-169 (1991)	
	74	Gefter et al., Somatic Cell Genet. 3:231-236 (1977)	
	75	Genesca et al., Am J Gastroenterol. 94:169-177 (1999)	
	76	Glockshuber et al., Biochem. 29:1362-1367 (1990)	
	77	Goeddel et al., Nucleic Acids Res. 8:4057 (1980)	
.,	78	Gorziglia and Kapikian, J. Virol. 66:4407-4412 (1992)	
	79	Haeberle et al., J Infect Dis. 186:1199-1206 (2002)	
	80	Hamers-Casterman et al., Nature 363:446-448 (1993)	
•	81	Hanck et al., Gut 49:106-111 (2001)	
	82	Helseth et al., J. Virol. 64:2416-2420 (1990)	
	83	Hodgson, Bio/Technology 9:19-21 (1991)	
	84	Huang et al., Hepatology 36(4) part 2: 439A, 2002	

Examiner	Date
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Substitute for form 1449/PTO	Complete if Known		
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Examiner Initials*	Cité No.	item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s) publisher, city and/or county where published.	
	85	Iimuro et al., Hepatology 26:1530-1537 (1997)	
	86	Johnson et al., J. Virol. 66:2952-2965 (1992)	
	87	Jones et al., Nature 321:522-525 (1986)	
	88	Kennett et al., Monoclonal Antibodies and Hybridomas: A New Dimension	
		in Biological Analyses, pp. 376-384, Plenum Press, New York (1980)	
	89	Khoruts et al., <i>Hepatology</i> 13:267-276 (1991)	
	90	Kohler et al., Eur. J. Immunol. 6(7): 511-519 (1976)	
	91	Kohler et al., Nature 256:495-499 (1975)	
	92	Kostelny et al., J. Immunol. 148:1547-1553 (1992)	
	93	Kozbor et al., Methods in Enzymology 121:120-140 (1986)	
	94	Kozal et al., Nature Medicine 2:753-759 (1996)	
	95	Krebber et al., J. Immunol Methods 201(1):35-55 (1997)	
	96	Ku et al., Proc. Natl. Acad. Sci. USA 92:6552-6556 (1995)	
	97	Kurt-Jones et al., Nat Immunol. 1:398-401 (2000)	
	98	Laso et al., Alcohol Clin Exp Res. 21(7):1226-1231 (1997)	
	99	Lawn et al., Nucleic Acids Res. 2:6103 (1981)	/
	100	Lee et al., Scand J Gastroenterol. 31(5):500-505 (1996)	
	101	Lewis et al., J. Pathol. 195:66-71 (2001)	
	102	Lin et al., J Hepatol. 22:165-172 (1995)	
	103	Liu et al,. Proc. Natl. Acad. Sci. USA 84:3439-3443 (1987)	
	104	Mackay et al., Nucleic Acids Res 30(6):1292-1305 (2002)	
	105	Madzak et al., J. Gen. Virol. 73;1533-1536 (1992)	
	106	Manigold et al., European Journal of Gastroenterology & Hepatology	
		15(3):275-282 (2003)	

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	107	Mann et al., J. Virol. 54(2):401-407 (1985)	
	108	Margolskee, Curr. Top. Microbiol. Immunol.158:67-95 (1992)	
	109	Matsumoto et al., Biochem Biophys Res Commun. 293:1364-1369 (2002)	
	110	Medzhitov et al., N Engl J Med. 343:338-344 (2000)	
	111	Miller et al., J. Virol. 62:4337-4345 (1988)	
	112	Miller et al., Mol. Cell. Biol. 5:431-437 (1985)	
	113	Miller, Curr. Top. Microbiol. Immunol. 158:1-24 (1992)	
	114	Moss et al., Curr. Top. Microbiol. Immunol. 158:25-38 (1992)	
	115	Moss, Proc. Natl. Acad. Sci USA 93:11341-11348 (1996)	
	116	Mullis et al., Quant Biol. 51:263 (1987)	,
	117	Muzyczka, Curr. Top. Microbiol. Immunol. 158:97-129 (1992)	
	118	Naldini et al., Science 272:263-267 (1996)	
	119	Nanji et al., Am J Pathol. 142(2):367-373 (1993)	
	120	Neuman et al., J Gastroenterol Hepatol. 17;196-202 (2002)	
	121	O'Neill "The toll/interleukin-1 receptor domain: a molecular switch for	
		inflammation and host defence," Biochemical Society Transactions	
		28(5):557-563 (2000)	
	122	O'Reilly et al., Biotechniques 25:824-830 (1998)	
	123	Ohi et al., Gene 89:279-282 (1990)	
	124	Pack, P. et al., Biochem 31(6):1579-1584 (1992)	
	125	Page et al., J. Virol. 64(11):5270-5276 (1990)	
	126	Paik et al., "Toll-like receptor 4 mediates inflammatory signaling by	
		bacterial lipopolysaccharide in human hepatic stellate cells," Hepatology	
	,	37(5):1043-1055 (2003)	

Examiner Signature		Date Considered	
	•		

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	127	Petroupoulos et al., J. Viol. 66(6):3391-3397 (1992)	
	128	Pluckthun A., et al., Antibody engineering: A practical approach, pp. 203-	
		252, IRL Press Oxford (1996)	
	129	Pugh et al., Br J Surg. 60(8):646-649 (1973)	
	130	Quantin et al., Proc. Natl. Acad. Sci. USA 89:2581-2584 (1992)	
	131	Reiter et al., Biochem 33(18):5451-5459 (1994)	
	132	Reiter et al., Cancer Res. 54:2714-2718 (1994)	
	133	Reiter et al., J. Biol. Chem. 269(28):18327-18331 (1994)	
	134	Riechmann et al., Nature 332:323-327 (1988)	
	135	Riordan et al., "Peripheral blood mononuclear cell expression of tool-like	
		receptors and relation to cytokine levels in cirrhosis," Hepatology	
		37(5):1154-1164 (2003)	
	136	Riordan et al., "Toll-like receptor expression in cirrhosis," Gut 52 No.	_
		Suppl. 1:A2 (2003)	
	137	Rivera et al., Am J Physiol. 275:G1252-1258 (1998)	
	138	Rosenfeld et al., Cell 68:143-155 (1992)	
	139	Russell et al., Nature Genetics 18:323-328 (1998)	
	140	Schafer et al., Z Gastroenterol. 33(9):503-508 (1995)	
	141	Scheidner et al., Nature Genetics 18:180-183 (1998)	
	142	Shimada et al. J. Clin. Invest. 88:1043-1047 (1991)	
	143	Shulman et al., Nature 276:269-270 (1978)	
	144	Sorge et al., Mol. Cell. Biol. 4(9):1730-1737 (1984)	
··	145	Stratford-Perricaudet et al., Hum. Gene Ther. 1:241-256 (1990)	

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	146	Summerton et al., Antisense and Nucleic Acid Drug Development 7:187-195		
		(1997)		
	147	Takeuchi et al. <i>Immunity</i> 11(4):443-451 (1999)		
	148	Tapping et al., <i>J Immunol</i> . 165:5780-5787 (2000)		
· · ·	149	Tilg et al., Gastroenterology 103(1):264-274 (1992)		
	150	Tilg et al., Hepatology 18(5):1132-1138 (1993)		
	151	Trowbridge, J. Exp. Med. 148(1): 313-323 (1978)		
	152	van Leeuwen et al., Surgery 110(2):169-174 (1991)		
	153	Verhoeyen et al., Science 239:1534-1536 (1988)		
	154	Visvanathan et al., "up-regulation of toll-like receptor expression in chronic		
		hepatitis C: correlation with circulating pro-inflammatory cytokine levels		
		and hepatic necro-inflammatory activity," Gut Vol. 52 No. Suppl. 1:A35		
		(2003)		
	155	Visvanathan et al., "impaired toll-like receptor expression in chronic		
		hepatitis B," Gut Vol. 52 No. Suppl. 1:A36		
	156	Volk et al., J. Virol. 42(1):220-227 (1982)		
	157	von Baehr et al., Gut 47:281-287 (2000)		
	158	Ward et al., Nature 341(6242):544-546 (1989)		
	159	Webber et al., Mol. Immunol. 32(4):249-258 (1995)		
	160	Wilkinson et al., Nucleic Acids Res. 20:2233-2239 (1992)		
	161	Winter et al., Nature 349(6307):293-299 (1991)		
	162	Yin et al., Gastroenterology 117(4):942-952 (1999)		
.,	163	Yoshimura et al., <i>J Immunol</i> . 163:1-5 (1999)		

Examiner	Date
Signature	Considered